Name _____ Period _____

ENERGY UNIT REVIEW (completed review sheet will be turned in before starting test)

I. Match the formulas and units by writing formula then the unit on the blanks provided: (There exits more units than you need to use and some units may be used several times)

A. W_{ork} = _____ = _____	1. $\frac{1}{2}mv^2$	a. joules (J)
B. $P.E._{gravitation}$= _____ = _____	2. $F\Delta s$	b. volts
C. K.E. = _____ = _____	3. mg	c. seconds
D. Q_{heat}= _____ = _____	4. W_{ork} / T_{ime}	d. watts (W)
E. $P_{ressure}$ = _____ = _____	5. v/t	e. Pascals (Pa)
F. P_{ower} = _____ = _____	6. s/t	f. calories/joules
G. F_{orce} = _____ = _____	7. mc^2	g. N·s or kg·m/s
H. $F_{gravity} = W_{eight}$ = _____ = _____	8. mv	h. square meter
I. E_{nergy} = _____ = _____	9. F/A_{rea}	i. m/s^2
J. v = _____ = _____	10. $F\Delta s$ (again, I know)	j. newtons (N)
K. a = _____ = _____	11. ma	k. meter
L. $P.E._{non\text{-}gravitational}$ = _____ = _____	12. mgh	l. seconds
M. Just a little p = ____ =_____	13. cmt	j. m/s

II. Note the following picking up an object and dropping it diagram and indicate what kind of energy exists at each phase of the diagram (with the interesting phenomena that each can be set equal at these chosen spots)

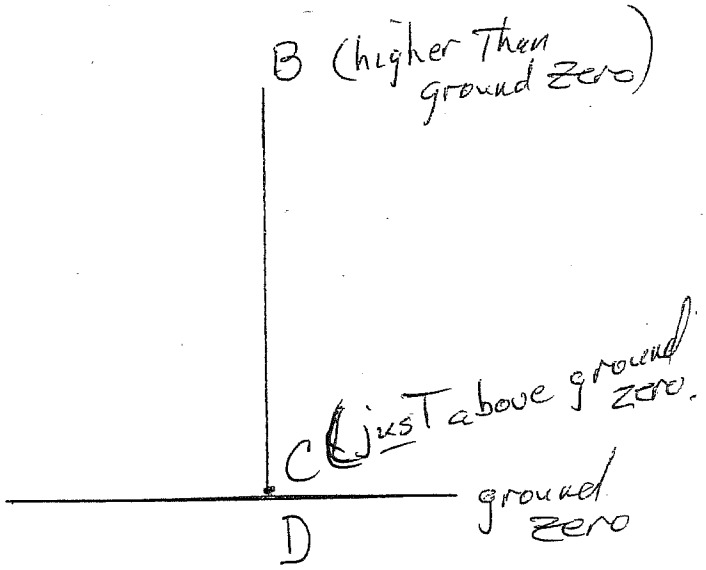
1. One has to do what do get the object from position A to position B? _____

2. What type of energy does the object have at position B? _____

3. What type of energy does the object Have at position C? _____

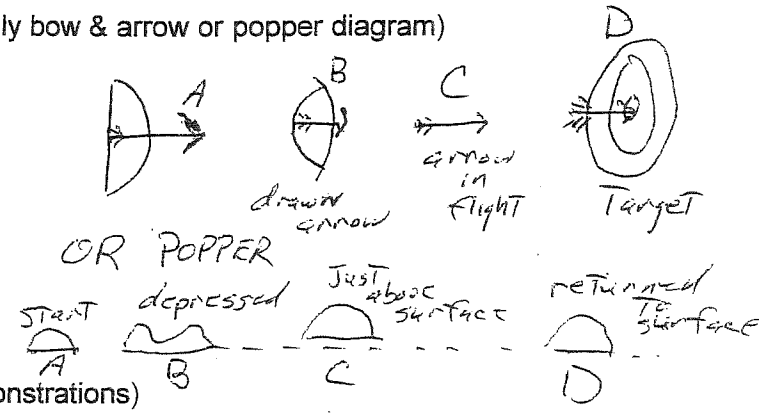
4. What type of energy does the object convert to at position D? _____

5. What can one calculate at position C if one knows the work it took to get the object to position B or the P.E. at position B? _____
(note: an answer other than K.E. or Quantity of heat it could provide in the next instant of time)



III. Same as part II above only a new diagram (only bow & arrow or popper diagram)

1. One has to do what do get the object from position A to position B? _____
2. What type of energy does the object have at position B? _____
3. What type of energy does the object Have at position C? _____
4. What type of energy does the object convert to at position D?



IV. Demonstrations: (* asterisks you favorite demonstrations)

Name all the pressure demonstrations we did/stories told:

1. _____ 5. _____
2. _____ 6. _____
3. _____ 7. _____
4. _____ 8. _____

Name all non-pressure demonstrations/videos/stories told:

1. _____ 8. _____
2. _____ 9. _____
3. _____ 10. _____
4. _____ 11. _____
5. _____ 12. _____
6. _____ 13. _____
7. _____

V. Labs/Purpose (* asterisks your favorite labs)

	Lab Title	Purpose
1.		
2.		
3.		
4.		
5.		

VI. Problems (********* Note: responsible for all homework sheet type problems ****)

1. You raise a 10.0 kg object to a height of 2.00 meters, then carry it 5.00 meters to a counter at a height of 1.50 meters and set the down on the counter.
   a. How total work did you do on the object when had set it on the counter?
   b. How much P.E. does the object have on the counter?
   c. If the object fell to the floor, how much K.E. would it have just before it hit the floor?
   d. How fast would the object be moving just before hitting the floor?
   e. How many joules of heat would the object and the floor receive after contact?

2. If a 70 kg person, carrying a 30 kg backpack up a mountain, ate an energy bar that claimed on the wrapper that it would provide 120 calories, how many vertically feet should that energy bar get the climber up that mountain before her/his body starts using the climbers fat energy?

3. If it requires a force of 10 N through a distance of 2 cm to push a 5 g popper down. A. How high will the popper go? B. At what speed will the popper hit the table?